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AUTHOR Devin-Sheehan, Linda; Allen, Vernon L.
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ABSTRACT

Part of a larger investigation of cross-age interaction in one-room schools, this study focused on the extent and characteristics of peer tutoring in contemporary one-room schools. Since Nebraska had more one-teacher schools (626 in 1971-72) than any other state, all one-teacher schools with an enrollment of 10 or more students in grades 1-6 or 8 were selected. A questionnaire was administered in April and May 1973 to 110 teachers and 1,405 students in 110 one-teacher schools located throughout the State. The 53-item student questionnaire was administered by the teachers. Teacher questionnaires consisted of 46 items. Data were not obtained from kindergarten children, severely handicapped students, or absent students. Among the findings were: (1) approximately 34 of the 110 schools had students tutoring other students on a regular basis; (2) there was considerable overlap between students who were tutors and those who were tutees; (3) tutors preferred having more than one tutee and tutees preferred having 3 or more tutors; and (4) both tutors and tutees expressed greatest satisfaction when working with students of both sexes, less satisfaction when working with those of the same sex, and least satisfaction when working with students of the opposite sex. (NQ)

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PEER TUTORING IN ONE-ROOM SCHOOLS

by

Linda Devin-Sheehan and Vernon L. Allen

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Peer Tutoring in One-Room Schools

Many apparently innovative practices in today's elementary schools have their roots and antecedents in the traditional one-room school. Educators are increasingly emphasizing the importance of taking into account the individual child's needs, abilities, background, and interests; this emphasis is reflected in efforts to personalize instruction through such approaches as open classrooms, family grouping, individualized instruction, and cross-age tutoring programs. These popular trends are reminiscent of the one-room school.

The present study was undertaken because of the unique qualities of a one-room or one-teacher school (terms we shall use interchangeably) and their implications for education today. This report, part of a larger investigation of cross-age interaction in one-room schools, focuses on the extent and characteristics of peer tutoring in contemporary one-room schools. Cross-age teaching was of particular interest to us since one of the distinctive features of one-teacher schools is the longstanding tradition of having older children help younger children and more competent students help those who are less competent.

One-room schools can provide a new perspective on peer tutoring, for in these schools, cross-age teaching does not exist as a packaged program complete with inservice training, but rather as a teaching method developed for strictly pragmatic reasons by individual teachers, working independently and with few strictures imposed upon them. Further, peer tutoring in these schools is unlikely to exist as a new and experimental program, but rather as a familiar and traditional means of teaching and learning. In particular, we were interested in determining the prevalence of peer tutoring in contemporary one-room schools, the teachers' rationale for peer tutoring, and their bases for selecting student

tutors and tutees. Also, we examined sex and age characteristics of tutors and tutees, and how these variables affected student attitudes towards being tutors and tutees.

One-Room Schools: Historical and Descriptive Background

Because one-room schools have a unique role in our educational system, a brief summary of their national history and physical characteristics will provide a useful framework in which to consider our research populations The historical significance of the one-room school is clear: only in the last century have the majority of Americans received their early education in any place other than the one-room school. In this century, however, one-teacher schools have decreased from 200,004 in 1915-16 (Gaumnitz, 1940) to 25,200 in 1957-58 (Gaumnitz, 1959) to 2,143 in 1970 (U.S. Department of HEW, 1971, p. 28). As we shall describe, twentieth century one-teacher schools both resemble and differ in important respects from their historical antecedents.

The contrast of contemporary one-teacher schools with the early colonial schools is fairly obvious. The colonial schools were essentially religious institutions, with increased secularization occurring only in the early 1800's. (No longer do we have textbooks like the one so popular in seventeenth century New England entitled Spiritual Milk for American Babes, Drawn out of the Breasts of both Testaments for Their Soul's Nourishment [Cubberley, 1919, p. 44].) The basic teaching method in colonial schools consisted of having pupils study independently at their seats, and then recite at the teacher's desk. From colonial times until the early nineteenth century, the prevalent form of public education was a community or district school controlled by local citizenry (Cubberley).

Other than increased secularization of the schools, few major changes or improvements in the educational system occurred until after the 1830's. The

The changes subsequently taking place had far more profound effects upon the organization and curricula of urban and town schools, than upon the one-teacher, rural schools. In 1897, a report published by the National Education Association revealed widespread unsatisfactory conditions in the rural one-room schools. Interestingly, many of the problems cited in that report recur in a national survey of one-teacher schools also conducted by the National Education Association sixty-two years later, in 1958-59 (NEA, 1960). Both reports describe schools that are frequently either under- or over-attended, with poorly equipped classrooms and underpaid teachers.

In many ways, contemporary one-room schools have surprising similarities to their nineteenth century counterparts. Typically, in the nineteenth century schools, students from Kindergarten through eighth grade sat most of the day on backless log benches, were warmed by a pot-bellied stove or fireplace at the rear of the room, obtained drinking water from a bucket using a communal tin or gourd dipper, had outdoor toilet facilities (if any), and provided their own books and lunches (Mead, 1963; Orr, 1962; and Rissler, 1966). In comparison, consider a few of the descriptive statistics from the 1960 NEA report based on questionnaire information from 2,376 one-teacher schools in 48 states: only one-third of the schools had running water, 55% used only a stove for heat, 68% had outdoor toilets, and 67% had no telephones. Almost three-fourths of the schools had no lunch or food service, and approximately two-thirds of the teachers did their own custodial work, in addition to teaching six to eight grades (and frequently Kindergarten as well).

These fairly recent figures deal primarily with physical characteristics of the schools. As Julia Weber Gordon (1946) makes clear in her diary describing a one-room rural school in the 1940's, a quality education can be offered despite a limited school budget, and a rich and stimulating learning environ-

ment is not necessarily incompatible with a primitive rural school building. Unfortunately, there has been no systematic attempt to determine what educational practices do prevail in one-teacher schools, either in the past or at present. One purpose of our own research was to look more carefully at classroom procedures in today's one-room schools, and, in particular, to obtain descriptive information about the use of peer tutoring in these schools.

Procedure

Schools in Nebraska were selected for data collection because Nebraska had more one-teacher schools (626 in 1971-72) than any other state. After contacting the Nebraska Department of Education, the names of appropriate schools and teachers were obtained from county school superintendents. All one-teacher schools named by the county superintendents which had an enrollment of ten or more students in grades one through six or eight were requested to participate. Teachers in these schools were asked to complete questionnaires and to have their classes complete questionnaires. Data were not obtained from Kindergarten children, from students with severe handicaps, or, of course, from absent students. This report is based on questionnaire data obtained in April and May, 1973, from 110 teachers and 1,405 students in 110 one-teacher schools located throughout the state of Nebraska.

The questionnaires, which we had written and pilot-tested, were administered by the teachers. The student questionnaires were 14 pages long, consisted of 53 items, and required approximately an hour to complete. The Teacher Questionnaire was 12 pages in length with 46 items, some with several parts.

Results

Student Data

Responses to the student questionnaires showed that most of the students

in the sample were in the appropriate grade for their age group and had attended the school they were currently in since Kindergarten. The 1,405 students in the sample formed an even distribution across grades and between sexes, with a slight drop in number at the seventh- and eighth-grade level.

Questionnaire responses indicated that approximately one-third (34) of the 110 schools had students tutoring other students on a regular basis. Surprisingly, the younger students (in grades one through three) reported they were tutors almost as frequently as the older students. Boys in the lower three grades were tutors as often as girls, but the older girls were tutors more frequently than the older boys (in grades four through eight). (Twenty-six percent of the older girls as compared with 18% of the older boys reported they were tutors.)

Students who were tutors had generally favorable reactions to tutoring. Only 29 of the 297 tutors reported not liking tutoring very much, and girls enjoyed being tutors more than boys. Boys and girls were tutees to the same extent, and youngers were tutees more than olders (26% as compared with 17%). Students who were tutored also felt positively about the experience; only 32 of the 285 tutees reported they did not like being tutees very much. Younger students reported much more positive reactions to being tutees than did the older students, with no sex differences occurring.

One of the more surprising findings was the considerable overlap between students who were tutors and students who were tutees. Among the younger students, 91 of the 103 tutors were also tutees, and 91 of the 137 tutees were also tutors. (The proportion was constant across sexes.) Among the older male students, two-thirds (approximately 50 out of 75) of the tutors were also tutees, with the same figures applying to tutees who were tutors. Almost all of the older female tutees were also tutors (72 of 77 tutees),

and two-thirds (72) of the 117 tutors were also tutees. Thus, the vast majority of the students involved in tutoring were both tutors and tutees. Also of interest was the finding that the satisfaction derived from being a tutor or tutee was not influenced by whether students were both, or only one or the other;[1] that is, tutors reported enjoying tutoring to the same extent whether or not they were also tutees, and being tutors did not affect how much tutees reported enjoying being tutees.

Two variables that did influence student satisfaction with tutoring were the number of tutors and tutees students had and the sex of their tutors or tutees. Generally, tutees who reported having three or more tutors were more satisfied than those with one or two, regardless of the tutee's age or sex. (Among the tutees in the three categories having one, two, or three or more tutors, the percent of tutors in the High-Liking category were correspondingly 56%, 59%, and 73%.) Likewise, tutors reported least satisfaction when they had only one tutee, with females and older students being more satisfied when they had two tutees, and youngers preferring three or more. (Tutoring usually was on a one-to-one basis, even for tutors with more than one tutee.)

In regard to sex of tutor, female tutees' responses reflected no clear preference; males and younger tutees reported more satisfaction when they had tutors of both sexes and least satisfaction with tutors of the opposite sex. Similarly, male and younger tutors who had tutees of both sexes reported enjoying tutoring the most, followed by tutors with only same-sex tutees; and tutors with only opposite-sex tutees enjoyed it least. Female tutors showed no varying satisfaction according to sex of tutee, and older tutors enjoyed

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[1]Tutor and tutee satisfaction or enjoyment is derived from a four-point scale that measured how much students liked to tutor or liked to be tutored. Low-Liking refers to not much or moderate liking and High-Liking refers to a lot or a great deal of liking. Differences reported here compare the percent of students reporting High-Liking and reflect at least a 12% difference.

tutoring more when they had both sexes as tutees rather than same- or opposite-sex tutees. Further analyses are currently underway investigating other facets of tutor and tutee satisfaction and the effect of tutoring on student attitudes towards self, older and younger students, and school.

Teacher Data

Results for the Teacher Questionnaires are based on the responses of 110 teachers (107 females and three males) in one-teacher schools who completed the questionnaires and had their students complete questionnaires.

As reported above, 34 schools (31%) had some form of student or peer tutoring, which was defined as: a student who is more competent helping another student or students with a particular subject on a fairly regular basis. Percentages and statements made about tutoring in this section are based on the 34 schools reporting tutoring and describe the tutoring that took place during the 1972-73 school year.

Students from all grades were used as tutors. Consistent with the student questionnaire findings, teachers reported that in the lower grades boys and girls were tutors equally often, but in the upper four grades girls were much more likely than boys to be tutors. This seems to be at least partially due to the teachers' preferences, for in 82% of the schools, tutors were selected by the teacher. When asked on what basis they usually selected tutors, 22 of the 34 teachers (79%) indicated that they selected students of good achievement; half the teachers selected students with leadership qualities; only 7 (25%) selected students with weak self-confidence; and only 4 (14%) selected low-achieving students.

Again, consistent with the student responses, teachers reported that the large majority of tutees were in grades one through five. In contrast to student answers, however, teachers stated that more boys than girls were tutees.

In response to the question "Who usually decides which students are to receive tutoring?" 19 of the 34 teachers with student tutoring reported that they, the teachers, did; nine, that students asked to receive help; and five, that both students and teachers decided. Twenty-two teachers (65%) did the matching up of tutors and tutees.

Most tutoring was done on a one-to-one basis with some tutoring done on a one-to-two or one-to-three basis. In 27 of the 34 schools (79%), tutors had more than one student whom they tutored. In 25 schools tutoring sessions lasted 15 minutes or less. Tutors usually worked with their students each day (in 35% of the schools) or two or three times a week (52%). There was an equivalent number of same-sex and opposite-sex tutoring pairs. Various age differences existed between tutor and tutee, from same-age pairs to pairs with tutors and tutees five years and more apart. The most common age difference between tutor and tutee was two years (in 31% of the schools) followed by three and four years' difference (in 20%). Arithmetic, reading, and spelling, in that order, were the subjects most frequently tutored.

In addition to the 34 schools with reported student tutoring, 27 more schools had some kind of informal tutoring, which did not exactly fit the earlier definition, but which did involve students tutoring one another. Of the 61 teachers having formal and informal student tutoring, 54 gave reasons for doing so when asked in an open-ended question why they had student tutoring. (Teachers gave more than one reason, and these responses were categorized by a coder to simplify analysis.) The five most frequently given reasons for tutoring were that peer-tutoring 1) provided students with more individual attention than the teacher herself could offer (cited by 72% of the teachers); 2) provided academic benefits for the tutee (cited by 35%);

3) permitted peer-level communication (28%); 4) provided academic benefits for the tutor (26%); and 5) was enjoyable for the students (19%). Other reasons mentioned by several teachers included social advantages for the tutor or tutee, increased self-confidence for the tutor or tutee, and increased maturity or sense of responsibility for the tutor.

Summary

The one-room school is an intriguing and unexplored subject for research. The daily, purposeful gathering of small groups of children from five to fifteen years old has no parallel in our society. Given the long history and continuing existence of one-room schools, the remarkable fact is that no one has looked carefully or systematically at the unique characteristics of these schools. Certain current trends in education, such as individualized instruction and family or cross-age grouping suggest that we could benefit from the experiences of schools that have a tradition or such practices. In particular, the use of older and more competent children as helpers for those who are younger or less competent has a special and established place in the one-room school. Because peer tutoring is likely to be an established and pragmatically evolved teaching device in these schools, its implementation and the students' and teachers' attitudes towards such tutoring is of special interest.

One of the significant findings of this study is that the practice of peer tutoring is not necessarily a part of education in contemporary one-room schools. In the one-room schools comprising our sample (110 Nebraska schools, each with a minimum of ten students), 34 schools have students regularly tutoring other students, with 27 more schools having some other, more informal or irregular form of student tutoring. In our sample, peer tutoring was used by the teachers primarily for the benefit of the tutees, to provide them with

individual, academic help, although some teachers did feel that it was beneficial for the tutors as well, and some deliberately selected students who were low-achieving or lacking confidence. The typical tutoring pattern was for a student tutor to work with a student two to four years younger, for 15 minutes or less, two to five times a week. It is noteworthy that considerable diversity existed in the ages and age differences of tutors and tutees, and that an equivalent number of same-sex and cross-sex tutoring pairs existed. The frequency of tutoring sessions during the week also varied, as did the number of tutees each tutor had, with most tutors having more than one tutee, and most tutees, more than one tutor (although tutoring usually did occur on a one-to-one basis). This variation in implementing peer tutoring, which existed within and across schools, suggests that no one combination of sex and age factors has proven to be optimal for successful peer tutoring.

As shown by the questionnaire data from the students, peer tutoring is popular with both tutors and tutees. Females enjoyed being tutors more than males, and younger students had more positive reactions towards being tutees than did older students. Of particular interest was the finding that most of the tutors in one-room schools were also tutees, and most tutees were also tutors. Although whether students fell in only one or both of these categories did not affect their satisfaction in being a tutor or tutee, two variables did prove to be relevant: number and sex of the students' tutees and the students' tutors. Tutors preferred having more than one tutee, and tutees preferred having three or more tutors. In regard to sex-pairing, both tutors and tutees expressed greatest satisfaction when they worked with students of both sexes, less satisfaction when working with students of the same sex; and they enjoyed least working with students of the oppostie sex.

The information presented here is part of work in progress; further analyses using more sophisticated statistics are presently being performed on these and additional data. We expect the peer-tutoring information from Nebraska one-room schools, and other data obtained in our investigation or cross-age interaction in these schools, to be of theoretical and applied value to educators and psychologists concerned with student social and academic relationships. Clearly, there is much to be learned in the one-room school.

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